

USSR

A
AGEYEV, A. N., KISELEV, M. I., OVAKIMYAN, R. N.

"On the Flutter of a Current-Carrying Shell"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 40, No 5, Jan 1970,
pp 1159-1160

Abstract: The stability of current-carrying structures in high-velocity flows of a cooling liquid is studied, since it represents a subject of definite practical interest. The stability of a cylindrical, ideally conducting, current-carrying shell containing a current of ideal incompressible and nonconducting liquid is considered. It is shown that the magnetic field produced by the electric current and the flow of the liquid, as would be expected, lower the stability of the shell. The equation for shell radial perturbations in the shape of the cylindrical shell is solved and expressions are given for values of the flow velocity and current under which the system becomes unstable. It is stated that conditions for loss in stability for a shell of finite length can also be established without difficulty.

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2/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70
 CIRC ACCESSION NO--AP0117732
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME NEW EXPTL. RESULTS CONCERNING
 THE MAGNETIC RESONANCE IN PR PRIME3 POSITIVE DOPED YIG ARE PRESENTED AND
 DISCUSSED, TOGETHER WITH THE RESULTS FOR TB PRIME3 POSITIVE AND HO
 PRIME3 POSITIVE IN YIG ALREADY PUBLISHED, IN TERMS OF EXISTING THEORIES.
 THE MAGNETIZATION DIRECTIONS CORRESPONDING TO THE NEAR CROSSINGS OF
 ENERGY LEVELS IN THE CASE OF HO PRIME3 POSITIVE CAN LIE WITHIN A CERTAIN
 LOCAL PLANE AND, IN THE CASE OF PR PRIME3 POSITIVE, CAN COINCIDE WITH A
 LOCAL AXIS OF THE DODECAHEDRAL SITE (FOR TB PRIME3 POSITIVE, AS HUBER
 HAS FOUND, THESE DIRECTIONS FORM A CONICAL SURFACE). THE ANGLE AND
 TEMP. DEPENDENCES OF ΔH FOR TB PRIME3 POSITIVE AND HO PRIME3
 POSITIVE ARE VERY SIMILAR AND CAN BE EXPLAINED COMPLETELY IN TERMS OF
 SLOW RELAXATION. FOR PR PRIME3 POSITIVE, THESE DEPENDENCES IN THE
 DIRECTIONS OF NEAR CROSSINGS RESEMBLE THE "ANOMALOUS" BEHAVIOR FOR YB
 PRIME3 POSITIVE IN OCTAHEDRAL SITES. A CONTRIBUTION FROM TRANSVERSE
 RELAXATION IS PROBABLE IN THE CASE OF PR PRIME3 POSITIVE.
 FACILITY: INST. SEMICOND., LENINGRAD, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--RESONANCE IN FERRIMAGNETS CONTAINING PARAMAGNETIC IONS WITH NEAR
CROSSING ENERGY LEVELS -U-
AUTHOR-(03)-GUREVICH, A.G., AGEEV, A.N., KLINGER, M.I.
COUNTRY OF INFO--USSR
SOURCE--J. APPL. PHYS. 1970, 41(3), 1295-302
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--MAGNETIC RESONANCE, FERRIMAGNETISM, PARAMAGNETIC ION, MAGNETIC
TRANSFORMATION, HOLMIUM, YTTERBIUM, TERBIUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0498 STEP NO--US/0000/70/041/003/1295/1302
CIRC ACCESSION NO--AP0117732
UNCLASSIFIED

USSR

UDC: 621.315.592

AGRINSKAYA, N. V. and ARKAD'YEVA, Ye. N., A. F. Ioffe Physico-Technical Institute, Leningrad

"Edge of the Absorption Band of Compensated CdTe Crystals"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1630-1631

Abstract: Results are given of crystals doped with a donor impurity (In, with $10^{18}/\text{cm}^3$ donor concentration) with various degrees of compensation. Compensating acceptor defects were introduced with high-temperature annealing of the crystals in a vacuum. Curves are plotted for absorption of the specimens annealed under excess pressure of Cd vapor with no compensation, and for specimens with 0.3 and 0.99 compensation. The absorption factor k was measured up to values of 300 cm^{-1} , and was computed from the formula $I \sim I_0(1 - R)^2 e^{-kd}$, where I is the intensity of the light transmitted by the specimen, I_0 is the incident light intensity, R is the coefficient of reflection, taken to be 0.21, and d is the specimen thickness within the range of 0.7-0.35. The authors of this brief communication express their gratitude to S. M. Ryvkin and O. A. Matveyev for their comments on the work.

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USSR

UDC: 621.315.592

AGRINSKAYA, N. V. and ARKAD'YEVA, Ye. N., A. F. Ioffe Physico-Technical Institute, Leningrad

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USSR

AGEKYAN, T. A.

"Principles of the Theory of Errors for Astronomers and Physicists.
Second Edition"

Osnovy Teorii Oshibok Dlya Astronomov i Fizikov. Izd. 2-e. [English Version Above], Moscow, Nauka Press, 1972, 172 pages (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 Vso4 from the Annotation).

Translation: The principles of the modern theory of errors are presented and methods are indicated for its practical application. In order to provide a foundation for the solutions produced, necessary information is presented from the theory of probabilities. The book contains a significant number of problems with solutions. The book is a handbook for the application of the theory of errors. It can also be used as a teaching aid in an elementary course on the theory of probabilities for astronomers, physicists and engineers.

USSR

UDC: 534.13:546.212.54-185

AGAYEV, N. A., ABASZADE, Azad, Azerbaydzhan Scientific Research Institute of Power Engineering, Baku

"Experimental Determination of the Viscosity of Mixtures of Ordinary and Heavy Water at High Pressures"

Moscow, Doklady Akademii Nauk SSSR, Vol 209, No 4, 1 Apr 73, pp 829-831

Abstract: The authors study the viscosity of mixtures of ordinary and heavy water at pressures of 1-1200 kg/cm² and temperatures of 4-75°C. The research was done on a device proposed by I. F. Golubev for determining the viscosity of liquid and gases at high pressures (I. Golubev, N. A. Agayev, Vyazkost' predel'nykh uglevodorodov [Viscosity of Saturated Hydrocarbons], 1964). It was found that the concentration dependence of the mixtures decreases with an increase in temperature. The isobars of the concentration dependence of viscosity decrease at constant temperatures in the region close to the melting point.

USSR

ABDULLAYEV, G. B. et al., IAN AzerbSSR, Seriya Fiz.-Tekhn. i Mat. Nauk, Fiz. i Astron., No 1, 1971, pp 39-44

the specimen. In the case of tensile strain, the deformation curve at 20 ma has two linear segments with different slopes: the first at relative deformations below $1.2 \cdot 10^{-4}$ relative unit, and the second (with greater slope) from $1.2 \cdot 10^{-4}$ to $2.2 \cdot 10^{-4}$ relative units. Strain sensitivity in the range from $5 \cdot 10^{-5}$ to $2 \cdot 10^{-4}$ unit of relative deformation is 1.5 times as great for tension as for compression. Experiments with P-type lead sulfide strain-sensitive resistors showed that specimens of this type made by powder metallurgy methods have low resistance to mechanical and thermal loading. Chlorine-doped pressed polycrystalline specimens of N-PbS are thermally stable at temperatures up to 1000°K. Specimens tested under various dynamic conditions withstood $2 \cdot 10^6$ cycles. Strain gauges based on lead sulfide resistors can be used to measure relative deformations of as little as 10^{-6} relative unit. Three figures, bibliography of seven titles.

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PHYSICS

Crystals and Semiconductors

USSR

ABDULLAYEV, G. B., KULIYEV, A. Z., AGAYEV, A. I., ABDULLAYEV, E. A.,
KAKHRAMANOV, K. Sh., Institute of Physics, Academy of Sciences of the
Azerbaijdzhan SSR

"N-Type Lead Sulfide Strain-Sensing Semiconductor Resistors"

Baku, IAN Azerbaydzhanskoy SSR, Seriya Fiziko-Tekhnicheskikh i Matemati-
cheskikh Nauk, Fizika i Astronomiya, No 1, 1971, pp 39-44

Abstract: The authors study specimens of $PbCl_2+Pb$ -doped lead sulfide strain-sensing resistors with electron concentrations of $6.3 \cdot 10^{13}/cc$. This dopant gives specimens with a high electron mobility. Contacts were made by the galvanic method, thermal welding, and vaporization. The output of the GZ-34 sonic generator was used as the source of supply. The signal frequency was 2 kHz. A study was made of the effect of strain on the current-voltage characteristic of a specimen. It was found that the slope of this curve is a linear function of strain in the range of $2 \cdot 10^{-1}$ - $5 \cdot 10^{-4}$ relative units. Deformation curves show that the change in relative resistance is practically linear and depends on the current flowing through

USSR

UDC 669.29-157:541.135

KOSTIKOV, V. I., GRIGOR'YEV, G. A., ARSHIPKIN, V. I. and AGAYEV, A.D.,
Moscow Institute of Steels and Alloys

"Surface Tension Measurements of Group IV High-Temperature Metals"

Moscow, Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya,
No 3, 1972, pp 25-27

Abstract: The paper deals with surface tension measurements of refractory titanium, zirconium, and hafnium metals by employing the new method of suction of a cylinder into the molten metal versus the sessile drop, suspended drop, and drop weight methods used in earlier research. In the suction method the surface tension of the metals is measured from their force of suction of a solid plate or a cylinder into the melt. A diagram of the surface tension measuring device is shown. Correlation of measurement data shows good agreement with those in earlier papers involving the use of other procedures. The high accuracy of the method coupled with the equally good reproducibility of results makes this method suitable for use in measuring the surface tension of metals featuring extremely high melting points. (1 illustration, 1 table, 8 bibliographic references)

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Graphite

UDC 669.11.2.063.5:669.29-154

USSR

GRIGOR'YEV, G. A., ARKHIPKIN, V. I., AGAYEV, A. D., and KOSTIKOV, V. I.,
Moscow Institute of Steel and Alloys

"On the Wetting Kinetics of Graphite With High-Melting Liquid Metals"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7,
1972, pp 15-18

Abstract: The Department of Physical Chemistry of the Moscow Institute of Steel and Alloys has developed a new method for describing the process of wetting graphite with high-melting liquid metals. The process is described on the basis of the dimensionality theory by derived criterional equations. The method is used in conjunction with a tensometric device and a loop oscillograph. The force acting on a vertical pin or plate is registered from the initial contact with the horizontal surface of the melt until the equilibrium state is reached. Three types of oscillograms for Ti, Hf, V, Nb, and Zr were derived and the relaxation times of the graphite wetting process with these metals were determined. In the case of wetting with liquid Zr, the kinetics of the process are obviously determined by the propagation rate of the carbide film on the graphite surface, the relaxation time being of the same order as for other metals (≈ 0.001). One figure, one table, five formulas, four bibliographic references.

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USSR

AGAYAN, YU. M., Doklady Nauchno-tekhn. Konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. (Apr 1970 g.). Seks. Radiotekhnicheskaya. Podseks. Liniy peredachi i volnovodn. ustroystv, 1969, pp 55-60 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2B109)

waveguides with known field structures. Results are presented of an experimental study of wave transmission in a rectangular DW with a nearby diaphragm in the form of a conducting half-plane. The edge of the half-plane is parallel to the broad or narrow walls of the DW. The dependence of the diaphragm parameters on the distance to the DW is nearly exponential. It is shown that shift of the section causes losses which are proportional to the square of the shift magnitude. The acceptable error in joining DW is one to two orders greater than for metallic waveguides. Gap losses are proportional to the first power of the magnitude of the gap. For small angles, section rotation losses are proportional to the square of the rotation angle. Three illustrations. F.F.

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USSR

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UDC 621.372.826

AGAYAN, YU. M.

"Dominant Wave Passage Through Sharp Irregularities in Dielectric Waveguides"

Doklady Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. (Apr 1970 g.). Sekts. Radiotekhnicheskaya. Podseks. Liniy peredachi i volnovodn. ustroystv (Reports of the Scientific-Engineering Conference on Advances in Scientific-Research Studies in 1968-1969 (Apr 1970). Section on Radio Engineering, Subsection on Transmission Lines and Waveguide Devices). Moscow, 1969, pp 55-60 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2B109)

Translation: A generalized characteristic in the coordinates "reflection coefficient-transmission coefficient" is suggested for the description of sharp irregularities in dielectric waveguides (DW). The possibility is indicated of the approximate calculation of waveguide dielectric diaphragms and the shift of dielectric
1/2

Management Service

— 4 —

1997

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Because of the patient's deteriorating economic condition, an operation was carried out — first with a local anesthetic and then under ether anesthesia. Initially, following a preliminary incision to the right iliac fossa, the 1000-cc. abscess, containing a thick, creamy, offensive pus — an abscess composed of a large cavity outer, the additional wall, and the thin up against the outer wall also of the additional wall. Abscesses having been removed on opening the surgical field of the abdominal cavity, the abscess cavity was drained, there was formed a cavity 20 x 10 cm., the bottom of which was lying on peritoneal cavity. The peritoneum was dry, and a deep, thin, fibrous cavity was formed. The additional cavity was opened, and some 100 ml. of hemorrhagic exudate was removed. The uterus and the additional cavity were examined and a cystic, partially altered term fetus was removed. 300,000 units of penicillin and streptomycin were injected into the additional cavity and the uterus, and the wound was sutured tight. Labor by itself. The placenta cavity was loosely tamponaded. Postoperative progress was uneventful. The patient was released from the hospital on the 23rd day.

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2/2 027

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119393

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEAT COND. COEFFS. (λ IN KCAL-M-HR-DEGREESC). HEAT TRANSFER COEFFS. (α IN DEGREES M PRIME²-HR), AND VOL. HEAT CAPACITIES (C EQUALS λ - α) WERE DETD. FOR EBONITES MADE FROM SYNTHETIC RUBBER SKMS-50P FILLED WITH LESS THAN OR EQUAL TO 300 PARTS OF EBONITE POWDER, KEROGEN, CARBON POWDER, OR KAOLIN IN THE 30-170DEGREES RANGE. THE TEMP. HAD NO EFFECT ON λ AND α . THE INCREASE OF THE FILLER AMT. INCREASED λ AND α . TYPICALLY λ AND α OF THE UNFILLED EBONITE WERE, RESP., 0.181 AND 3.71 TIMES 10 NEGATIVE PRIME⁴., λ AND α OF THE EBONITES CONTG. 100 PARTS AND 300 PARTS CARBON POWDER WERE, RESP., 0.203, 4.24 TIMES 10 NEGATIVE PRIME⁴ AND 0.244, 4.74 TIMES 10 NEGATIVE PRIME⁴. THESE EBONITES CONFORMED TO THE PHONON THEORY OF HEAT TRANSFER AND THE EQUATION λ EQUALS $CUL-3$ (U IS THE AV. PHONON VELOCITY APPROXIMATELY EQUAL TO 2.5 TIMES 10 PRIMES CM-SEC AND L IS THE AV. FREE PATH OF THE PHONON). FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THERMOPHYSICAL PROPERTIES OF FILLED EBONITE MIXTURES BASED ON
SKMS-50P -U-
AUTHOR--(05)-ZANEMONETS, N.A., YEGOROVA, S.A., NEKRASOVA, E.I., AGAYANTS,
I.M., KOCHANOVA, O.M.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(2), 27-9
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--FILLER, SYNTHETIC RUBBER, HEAT TRANSFER COEFFICIENT, HEAT
CAPACITY, EBONITE, STYRENE/(U)SKMS50P SYNTHETIC RUBBER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0457 STEP NO--UR/0136/70/029/002/0027/0029
CIRC ACCESSION NO--AP0119393
UNCLASSIFIED

USSR

UDC: [537.226+537.311.33] : [537+535]

AGASYEV, A. A. and MURADOV, R. B.

"Some Peculiarities of Volt-Ampere Characteristics for Amorphous Films of AsSI and AsSeI"

Uch. zap. Azerb un-t. Ser. fiz.-mat. n. (Educational Notes, Azerbaijan University. Physics-Mathematical Science Series--collection of works) No. 1, 1971, p 96 (from RZh-Fizika, No. 11, 1971, Abstract No. 11E1005)

Translation: The volt-ampere characteristics for switching and memory in amorphous sputtered films of AsSI and AsSeI, 1-5 μ thick, were observed. The threshold voltage was 4-20 volts, high resistance was 10^6 - 10^7 ohms, and the low resistance ≈ 10 - 10^2 ohms.

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2/2 017

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135132

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPERTIES OF THE SYSTEMS BU SUB3 PO SUB4 H SUB2 O AND BU SUB3 PO SUB4 H SUB2 O DILUENT WERE STUDIED. THE SOLVENTS USED WERE KEROSENE, BENZENE, METHYLBENZENE, CHCL SUB3, BU SUB2 O, CCL SUB4, OR AS MIXTS. WITH BU SUB3 PO SUB4. THE EFFECT OF URANYL NITRATE ON THE SOLY. OF WATER IN THE SYSTEM H SUB2 O BU SUB3 PO SUB4 URANYL NITRATE SOLVATE AND THE PHYS. CHEM. INTERPRETATION OF THE RESULTS FOR BU SUB3 PO SUB4 H SUB2 O SYSTEM AT VARIOUS TEMPS. ARE DISCUSSED. THE EXTN. OF H SUB2 O IS DEPENDENT ON AN ENTROPY EFFECT, A DECREASE IN THE EXCESS ENTROPY IN BU SUB3 PO SUB4 H SUB2 O SOLNS. APPARENTLY, THE EXTN. OF H SUB2 O IS DEPENDENT ON SOME ORDERING IN THE ORG. PHASE.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EXTRACTION OF WATER BY TRIBUTYL PHOSPHATE AND SOLUTIONS OF TRIBUTYL
PHOSPHATE IN DILUENTS -U-
AUTHOR-(05)-ROZEN, A.M., KHORKHORINA, L.P., AGASHKINA, G.D., TETERIN,
E.G., MALTSEVA, A.N.
COUNTRY OF INFO--USSR

SOURCE--RADIOKHIMIYA 1970, 12(2), 345-55

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC PHOSPHATE, ORGANIC SOLVENT, URANYL NITRATE, ENTROPY,
SOLVENT EXTRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1461

STEP NO--UR/0186/70/012/002/0345/0355

CIRC ACCESSION NO--AP0135132

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100264

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MASS SPECTRA OF 4 ISOMERS OF 1 BENZOYL, 2 METHYLDECAHYDROQUINOLINE AT IONIZATION VOLTAGES OF 20 AND 70 V WERE OBTAINED. THE DISTRIBUTION OF POS. CHARGE BETWEEN N AND FRAGMENTS CONTG. BENZOYL IS AFFECTED BY THE STRUCTURE AND CONFIGURATION OF THE MOL. IN THE CASE OF ISOLATED BENZOYL AND AMINO GROUPS, POS. IONS CONTG. N PREVAILED. IN THE CASE OF AMIDES, THE POS. CHARGE WAS LOCALIZED IN FRAGMENTS CONTG. C SUB6 H SUB6 AND THE DEGREE OF LOCALIZATION INCREASED WITH INCREASED EFFICIENCY OF CONJUGATION.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--CONFIGURATION AND REACTIVITY OF SATURATED CYCLIC AND HETEROCYCLIC
COMPOUNDS -U-
AUTHOR--(05)-LYUTS, A.YE., AGASHKIN, D.V., ARTYUKHIN, V.I., SOKOLOV, D.V.,
LITVINENKO, G.S.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK KAZ. SSR, SER. KHIM. 1970, 20(1), 74-81

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MASS SPECTRUM, BENZENE DERIVATIVE, QUINOLINE, AMINE, AMIDE,
CONJUGATE BOND SYSTEM, ISOMER, IONIZATION POTENTIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/1660

STEP NO--UR/0360/70/020/001/0074/0031

CIRC ACCESSION NO--AP0100264

UNCLASSIFIED

USSR

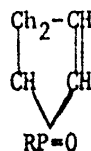
UDC 541.64+547.241

RAFIKOV, S. R., Academician of the Kazakh SSR Academy of Sciences, KAZAKOVA, N. D., D'YACHKOV, G. A., and AGASHKIN, O. V,

"Structure of the Products of Interaction of Aryldichlorophosphines and Divinyl"

Moscow, Doklady Akademii Nauk SSSR, Vol 196, No 4, 1971, pp 831-833

Abstract: The structure of oxides of unsaturated cyclic phosphines has not been established. This paper presents a study of the conditions of formation of cyclic addition compounds. The structure of the corresponding phosphine oxides is established. The interactions of tolyldichlorophosphine with divinyl are considered, and the infrared and nuclear magnetic resonance spectra of the products of these interactions including unsaturated cyclic phosphine oxide are presented. Analysis of these spectra indicates the following structure



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USSR

UDC 51

AGASANDYAN, G. A.

"Operative Control System for Controlling Analog-Digital Assembly Production"

V sb. Detsentralizovan. metody upr. (Decentralized Control Methods--collection of works), Moscow, 1972, pp 35-38 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V399)

No abstract

USSR

UDC 911.3.616.928.6(47+57)

ARIYEVICH, A. M., STEPANISHCHEVA, Z. G., LYSENKO, A. Ya., MALKINA, A. Ya.,
AGARUNOVA, Yu. S., DARCHENKOVA, N. N., BARKOV, V. N., and MINSKER, O. B.

"Three-Year Study of Histoplasmosis in the USSR"

V. sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med.
parazitol. i trop. med. (Proceedings of the Scientific Conference Com-
memorating the 50th Anniversary of the Institute of Medical Parasitology
and Tropical Medicine -- collection of works), Moscow, 1970, pp 61-63
(from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.124)

Translation: A total of 31 cases of histoplasmosis were recorded in the
USSR by the beginning of 1970. Of these, 24 were in Western Siberia. A
total of 690 soil specimens were examined, gathered from sites where histo-
plasmosis was recorded (Tyumenskaya oblast, Turkmen SSR and others) and from
sites having no cases (Armenian SSR and the environs of Moscow). The agent
of histoplasmosis was isolated from soil of the Turkmen SSR. In one out of
50 house mice (in Turkmen SSR) signs were found of histoplasmosis. Skin
tests (176 in Tyumen oblast and 591 in Turkmenia) were made yielding posi-
tive results in 2% and 5.6% of the cases studied, respectively.

2/2 020
CIRC ACCESSION NO--AP0119530

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS PAPER PRESENTS THE RESULTS OF
THE EXPTL. DETN. OF THE HEATS OF FORMATION OF TRIMETHYLCHLOROSILANE AND
METHYLTRICHLOROSILANE AND THE CALC. FOR THE HEAT OF ROMATION FOR A
SIXTH COMPO. IN THIS SERIES, GASEOUS MONOMETHYLMONCHLOROSILANE HAS BEEN

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERMOCHEMICAL STUDIES OF ORGANOMETALLIC COMPOUNDS. II.
THERMOCHEMISTRY OF METHYLCHLOROSILANES -U-
AUTHOR-(02)-GADZHEIV, S.N., AGARUNOV, M.YA.
COUNTRY OF INFO--USSR
SOURCE--J. ORGANOMETAL. CHEM. 1970, 22(2), 305-11
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMOCHEMISTRY, ORGANIC SILANE, ENTHALPY, ENTROPY,
CALCULATION, CHLORINATED ORGANIC COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0618 STEP NO--NE/0000/70/022/002/0305/0311
CIRC ACCESSION NO--AP0119530
UNCLASSIFIED

USSR

AGARTANOV, V. N., ANTIPOV, V. B., KOLPAKOV, V. V., FEDORIN, Ye. M., Tomsk State University

"Effect of Intense Optical Emission on the Threshold of Instability of Spin Waves in the Case of Parallel Pumping"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 8, Aug 72, pp 2446-2448

Abstract: A single crystal of yttrium ferrite-garnet in the form of a rectangular prism measuring $3 \times 4 \times 13$ mm, with polished faces, having its axis coincident with crystallographic direction [111] was placed in the center of a reflective cylindrical cavity with TE_{011} mode in such a way that the axis of the specimen coincided with the axis of the cavity. Pumping was by 300-ns square pulses with a prf of 9.4 GHz. LDTI-68 laser emission was focused normal to the surface of the crystal in the center of the side face. A reduction was observed in the threshold of instability of spin waves which was attributed to the absorption of SHF power by particles knocked from the surface of the specimen into the cavity region where there was a strong alternating electric field.

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USSR

UDC 632.95

AGARONYAN, A. G., Candidate of Agricultural Sciences, Armenian Scientific Research Institute of Plant Protection

"Effectiveness of Applying Certain Analogs of Dalapone in the Vineyards of the Ararat Lowland"

Moscow, Khimiya v sel'skom khozyaystve, No 11, 1972, pp 55-57

Abstract: Since 1965 the English-made dalapone (sodium salt of 2,2-dichloropropionic acid) has been used in the vineyards of the Ararat Lowland. In order to replace it with Soviet analogs, tests were run on chlorotyl, trinate, hexanate, pentanate, propiam and propionate. The propionate and propiam are synthesized and prepared in the USSR. Chlorotyl, trinate, hexanate and pentanate exhibited very weak herbicidal effects on monocotyledonous and dicotyledonous weeds; when considering weeds such as Johnson grass, Bermuda grass, bindweed, and other plants before harvesting the vineyard, there were almost no signs of damage. Propionate (the sodium salt of 2,2-dichloropropionic acids) and propiam (the amine salt of 2,2-dichloropropionic acid) was almost as good as the English-made dalapone with respect to effectiveness against the weeds. The compounds can be recommended for production testing in the vineyards as substitutes for dalapone.

1/1

USSR

UDC 512.3

DYN'KIN, V.N. and ~~AGARONOV, D.A.~~

"Method of Expanding Polynomials in a Finite Field"

Problemy Peredachi Informatsii (Problems of Transmitting Information), 1970,
Vol 6, No 3, pp 82-86 (from RZh-Matematika, No 1, Jan 71, Abstract No 1A272)

Translation: This article investigates questions involved in the reducibility
of polynomials in the field $GF(2)$. Author's abstract.

1/1

- 82 -

USSR

AGARONIK, V. Ya., et al., V Sb. "Issled. Temperatur. Napryazheniy", 1972,
pp 103-132

of resistance tensors of the alloy containing chromium and nickel in the temperature range of up to 500°C are presented. Twenty two illustr., seven tables, thirteen biblio. refs.

2/2

USSR

UDC 531.781.087.92

AGARONIK, V. Ya., VASIL'YEVA, A. A., and DAYCHIK, M. L.

"Investigation of Characteristics of High-Temperature Resistance Tensors"

V Sb. "Issled. Temperatur. Napryazheniy" [In the Collection "Investigations of Thermal Stresses"], Moscow, "Nauka", 1972, pp 103-132 (from Referativnyy Zhurnal, No 11, Nov 72, 32. Metrologiya i Ismeritel'naya Tekhnika. Single Issue. Abstract No 11.32.369)

Translation: Methods and results are reported on investigations in the temperature range of up to 650°C of temperature and time characteristics used in high-temperature resistance tensors, wires 30 μ in diam., of Constantan, Nichrome, chromium and nickel containing alloys Kh20Ni30Cr and Kh20Ni30Cr, nickel-molybdenum alloy Ni23KhCr, and ferro-chromium-aluminum alloys OKh21Cr5Fe, OKh21Cr9, and OKh21Cr10. The principal increment dependences of the electric resistance of wires at isothermic aging were established and the critical temperatures for each alloy were determined above which a stabilization of the specific resistance and of the temperature coefficient of resistance tensors are impossible. The possibility is indicated to create self-thermobalanced resistance tensors in the interval of up to 350°C of chromium and nickel containing alloys Kh20Ni30Cr and Kh20Ni30Cr. Temperature and time characteristics

1/2

USSR

UDC 620.17

AGARONIK, V. Ya., VASIL'YEV, A. A., DAYCHIK, M. L., Issled. Temperatur.
Napryazheniy, Moscow, Nauka Press, 1972, pp 103-132.

teristics of tensoresistors of nickel-molybdenum alloy in the temperature
range up to 500° are presented. 13 Biblio. Refs.

USSR

UDC 620.17

AGARONIK, V. Ya., VASIL'YEV, A. A., DAYCHIK, M. L.

"Study of Characteristics of High Temperature Tensoresistors"

Issled. Temperatur. Napryazheniy [Studies of Temperature Stresses -- Collection of Works], Moscow, Nauka Press, 1972, pp 103-132, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V1347 by the author's).

Translation: Methods and results are presented from studies of temperature and time characteristics of constantan, nichrome, Kh20N80Yu and Kh20N80YuD chrome-nickel alloy, NM23KhYu nickel-molybdenum alloy and OKh21Yu5FM, OKh21Yu9 and OKh21Yu10 iron-chrome-aluminum alloy wires up to 30 μ in diameter, used in high temperature tensoresistors. The studies are performed at temperatures up to 650°. The basic dependences of the resistivity increment of the wires under isothermal holding are established and critical temperatures are determined for each alloy, above which stabilization of the specific resistance and temperature factor of resistance of the tensoresistors is impossible. The possibility is demonstrated of creating thermal self-compensation of tensoresistors in the interval up to 350° using chrome-nickel alloys Kh20N80Yu and Kh20N80YuD. The temperature and time charac-

1/2

Acc. Nr:

AP0036572

Ref. Code: UR 0391

PRIMARY SOURCE: Gĭgiyena, Truda i Professional'nyye
Zabolevaniya, 1970, Nr 2, pp 31-34

EXPIRED AIR TEMPERATURE AND CONDITIONING FUNCTION OF THE
RESPIRATORY SYSTEM IN HEALTHY AND PNEUMOCONIOSIS-AFFECTED
MINERS

F. T. Agarkov, S. V. Agarkova

Summary

The expired air temperature was registered in 864 practically healthy and pneumoconiosis-affected miners by means of an electrothermometer provided with a highly sensitive and low-inertia thermistor sensor. This was paralleled by the measurement of vital capacity of the lungs and the data obtained formed a basis for determining reserve conditioning potentialities of the respiratory system. As evidenced, the expired air temperature in practically healthy miners is approximately the same as in normal subjects engaged in mining, averaging $34.37 \pm 0.03^{\circ}\text{C}$. In pneumoconiosis and its progressive development the temperature of expired air goes down. This is accompanied by a distinct decrease of reserve conditioning possibilities of the respiratory system, whereby the intensity with which the conditioning function declines augments as the process of pneumoconiosis progresses in its development. }

REEL/FRAME
1972/424

D. 11

6

AGARKOV, V.P.

SO: JPRS 54019

9 SEP 71

UDC: 614.3-056.78(049.3)

SOME REMARKS CONCERNING PERIODIC PHYSICAL EXAMINATIONS

Article by V.P. AGARKOV, ^{100-21-(10010 4200)} ~~100-21-(10010 4200)~~ Moscow, Sovetskoye Zvezdopromyshlennoye, Russian, No. 1, 1971, submitted 23 February 1971, pp 25-28

Progress of socialist economics is inseparably linked with the productivity of labor. The economic indices of rise in productivity of labor are made up of a set of factors which determine the expediency and profitability of each unit of working time in industry.

In this regard, we should like to voice some views about periodic

physical examination of industrial workers which is done in accordance with Order No. 1001 dated 30 May 1969, issued by the USSR Minister of Health (which was approved by Order No. 100 dated 7 September 1967). In our opinion, there should be a revision of the justification of such physicals from the economic point of view. It is also important to discuss the effectiveness of their purpose.

At present, our therapeutic institution has been performing physicals on three kind workers. Over the people are subject to regular examination. Before the start of a new year special charts are prepared which are approved by enterprise directors and therapeutic institution administrators. These charts are prepared by the heads of polyclinics, of industrial physicians, and by the heads of enterprises. In the course of making preparations for the examination, the charts must be coordinated with the plant trade union committee.

An initial commission consisted of a plant therapist, specialist physician, nurse, and laboratory technician. Directions are called upon to the medical fields in which pathology is anticipated and where participation in the physical examination is anticipated in the order of the USSR Minister of Health. As a rule, the specialists are experienced in the work of industrial workers, they are well acquainted with their working conditions and occupational pathology, since they are also on the staff of plant polyclinics and also service the enterprises attached to them.

On the starting the physical examination, instructions are issued to the workers for the purpose of discussion -- editor.

public health

AGARKOV, V.P.

SO: JPRS 54514
18 NOV 1971

UDC: 659.382.2.07:614.441

ON THE OPERATION OF AN OFFICE FOR RECORDS AND INFORMATION ABOUT MORBIDITY
RATES AT INDUSTRIAL ENTERPRISES

V.P. AGARKOV

(Moscow, USSR)
(Article by V.P. Agarkov, Moscow, Sovetskoye Zdravookhraneniye, Russian, No 10,
1971, submitted 22 Nov 1971, pp 35-38)

The matter of information from industrial enterprises pertaining to absenteeism related to accidents and illness is not covered sufficiently in the medical literature. Yet the importance of such information is obvious, since the study of causes and development of measures to prevent recurrent cases of such accidents and sickness would help reduce the morbidity rate among workers.

We believe that there is some practical value to our experience, at a large therapeutic institution, of organizing a system of information on this score from sham therapists, chief medical specialists, the management and trade union organizations of enterprises. We did not encounter in the medical literature or at other hospitals such organization of an information system.

For over five years now, a morbidity registry and information office has been in operation in the hospital and polyclinic association consisting of nine polyclinics and 14 hospital departments. The hospital (over 1,000 beds) renders all types of medical care for six major industrial and seven subsidiary enterprises.

A nurse with long tenure works in the morbidity registry and information office.

The office is in the hospital business office. It has two telephones, one of them is an outside line. Information about individuals who have been examined from each member of illness is given over the telephone. There is a second nurse in the registry office who takes care of USSR Medical Commission for Determination of Disability affairs and who prepares the "Report on Temporary Disability" (form No 1-1). Both nurses are familiar with the work of the office and they can replace one another during vacations or in case one is ill.

The chief physician's assistant for expert evaluation of temporary disability of workers methodological guidance to the morbidity registry and information office.

Industrial Hygiene

Acc. Nr:

AP0051959

Ref. Code:

UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 3, pp 119-122

COPPER CONTENT IN THE LIVER OF MAN AND EXPERIMENTAL ANIMALS
FOLLOWING ITS ACUTE STIMULATION

Ye. S. Belozero, V. A. Agarkov

Tyumen Medical Institute

Copper content in the liver of humans who died of toxic liver dystrophy and in animals with acute experimental hepatosis was studied by applying spectral analysis. Along with this topography of copper granules was investigated histochemically after Okamoto-Uman and general morphology, RNA, acid and neutral mucopolysaccharides, glycogen levels studied. In animals the relationship of these indices with the introduction of microdoses of copper by parenteral and enteral routes (0.6 and 0.3 mg/kg) was studied. In acute lesion of the organ reduced copper concentration in the liver and the loss of copper granules by many hepatocyte nuclei were in evidence. Parenteral administration of copper to animals led to a marked increase of Kupffer cells in the liver and exercised normalizing effect on the parenchyma of the affected organ. Enteral and parenteral introduction of copper to animals with acute hepatosis restores concentration of copper in the liver.

REEL/FRAME
19820446

2 pc

USSR

DUNAYEV, P. V., and AGARKOV, V. A., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 71, No 3, Mar 71, pp 91-94

intensity on the 12-15th days, and continued throughout the period of observation. However, differentiation was poor, and the microorgan structures which developed were atypical. The equatorial and preequatorial zones of the crystalline lens epithelium appeared most susceptible to the injurious effects of x-rays.

2/2

USSR

UDC 612.6.03:612.844.1-06:612.014.481

DUNAYEV, P. V., and AGAROKOV, V. A. Chair of Histology and Embryology,
Tyumen Medical Institute

"Growth and Transformation of Epithelium Implants from the Crystalline Lens
After Whole-Body X-Ray Irradiation of the Donor With a Sublethal Dose"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 71, No 3,
Mar 71, pp 91-94

Abstract: Crystalline lens epithelium of mature white rats was implanted by the Lazarenko method 24 hours after whole-body x-ray irradiation of donors with 800 r. In a parallel control series, the donors were not irradiated. Histological and chemical analyses were performed on the implants on each successive day for three months. The control implants developed in the regular manner until they began to decompose on the 18th day after transplantation. The irradiated implants went through an initial period of depression and destructive changes, evidently as a result of the direct effects of the x-rays on the nuclear and cytoplasmatic components of the cells. Histologically, this was manifested by impaired glycogen synthesis. Growth and differentiation of the surviving cells began on the 9th day, reached maximum
1/2

Acc. Nr:

AP0036572

Ref. Code: UR 0391

PRIMARY SOURCE: Gĭgiyena, Truda i Professional'nyye
Zabolevaniya, 1970, Nr 2, pp 31-34

EXPIRED AIR TEMPERATURE AND CONDITIONING FUNCTION OF THE
RESPIRATORY SYSTEM IN HEALTHY AND PNEUMOCONIOSIS AFFECTED
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F. T. Agarkov, S. V. Agarkova

Summary

The expired air temperature was registered in 864 practically healthy and pneumoconiosis-affected miners by means of an electrothermometer provided with a highly sensitive and low-inertia thermistor sensor. This was paralleled by the measurement of vital capacity of the lungs and the data obtained formed a basis for determining reserve conditioning potentialities of the respiratory system. As evidenced, the expired air temperature in practically healthy miners is approximately the same as in normal subjects engaged in mining, averaging $34.37 \pm 0.03^{\circ}\text{C}$. In pneumoconiosis and its progressive development the temperature of expired air goes down. This is accompanied by a distinct decrease of reserve conditioning possibilities of the respiratory system, whereby the intensity with which the conditioning function declines augments as the process of pneumoconiosis progresses in its development.

REEL/FRAME
1972/1424

D. 11

6

USSR

AGARKOV, G.,^V Professor

"Dolphins and Bionics"

Kiev, Pod Znamenem Leninizma, 2 Dec 72, pp 53-60

Abstract: The basic goals and research results of the division of functional morphology of marine animals at the Institute of Zoology, Academy of Sciences Ukrainian SSR in Kiev are outlined with special emphasis on the dolphin and his relation to man. Afulina is the dolphin most capable of being trained. Seventeen species live in the coastal waters of the USSR and are protected by law. Studies have been made of the extraordinary speed of the dolphin under water (55 kilometers per hour) with insignificant energy consumption primarily connected with the special structure of the dolphin skin and subcutaneous musculature. The role of the elastic fatty cushion protruding from the head in eliminating turbulence at high speed and use of the principle on ships and aircraft are noted. The communication system of afulina with a range of from 1 to 1,200 sound vibrations per second used in "talking" and "sonar" capabilities is discussed. This system also operates from the fatty cushion on the dolphin's head. The dolphin's diving ability and its potential simulation are mentioned. No details of the research or specific results are given.

1/1

AGARKOV, G. V.

PART III. HYDROACOUSTICS

HYDROLOCATION CAPACITY OF DOLPHINS

Article by G. V. Agarkov, N. V. Golubina and L. G. Ryabenko. Kiev: Kiev, Biophika, Russian, No. 5, 1971. Izd-vo "Naukova Dumka," pp 51-56]

JPRS 55942
15 May 72

Much attention is now being devoted to the echolocation of dolphins because the acoustic system of a dolphin is exceedingly well developed and many of its components can be used in engineering.

The ranging system of a dolphin consists of two parts: transmitting -- a system of air bladders, larynx, fatty lens, reflector (skull bones), and receiving system -- organs of hearing, mechanoreceptors in the head, upper and lower jaws.

Transmitting part of dolphin ranging system. Along the nasal passage there are three pairs of sacs or bladders (premaxillary, tubular and vestibular). We will assume that sound generation occurs during passage of air from a sac into the nasal passage. The air bladders are surrounded by a system of fine, well-differentiated muscles regulating the air flow, in accordance with the nature of the sounds uttered by the dolphin and the complexity of the sound-forming system, one can postulate presence of a complex serantic-information process in the articulation of the sounds used in intercourse and navigation. The tubular and premaxillary sacs evidently participate in formation of the directional diagram, since the vestibular sacs protrude from the frontal part of the skull, playing the principal role in focusing of sounds [5, 9]. The system of air sacs, without taking into account the influence of the skull and lens, should have a directional characteristic different from circular.

Shifting of the directional characteristic is necessary for a total scanning of space. It is evidently possible to bring about some displacement of the ray by changing the

USSR

UDC 615.012.6:616.932

MAKSIMOVA, I. V., and ACAPOVA, N. S., Moscoe State University

"Effect of Cultivation Conditions on the Accumulation of Organic Matter in a Medium Used to Grow *Chlorella vulgaris* Strain LARG-1"

Moscow, Biologicheskiye Nauki, No 8, 1971, pp 98-104

Abstract: The various factors that slow algal development in a nutrient medium - low intensity of light, high pH, nitrate nitrogen, and increasing concentration of salts, - increased the amount of extracellular compounds in Tamiya's medium on which the LARG-1 strain of *Chlorella vulgaris* B was grown. A high osmotic pressure is known to inhibit algal development and photosynthesis. The experiments with *C. vulgaris* showed that the higher the osmotic pressure of the medium, the more intensively organic matter is released into the medium. A change in osmotic pressure gradually reduced the amount of extracellular substances released in the course of cultivation. An osmotic pressure of *C. vulgaris* B, strain LARG-1, cells of 4.75 atm, as in other freshwater algae, does not change with the concentration of the medium.

2/2 042

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123262

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MECHANICAL PROPERTIES WERE DETERMINED OF SAMPLES CUT OUT FROM THE METAL OF WELDS IN OOKH16N15M3B, GKH16N15M3B, OKH20N40B, AND IKH13M2BFR STEELS FOLLOWING IRRADIATION WITH A DOSE OF 2.8 TIMES 10 PRIME21 NEUTR,CM PRIME2 AND 4.3 TIMES 10 PRIME21 NEUTR,CM PRIME2 (E LARGER THAN OR EQUAL TO 1 MEV) AT A TEMPERATURE OF ABOUT 100DEGREESC. TESTS WERE CARRIED OUT USING UMD-5 BREAKING MACHINES AT 20, 350, AND 650DEGREESC IN THE AIR.

UNCLASSIFIED

1/2 042 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE EFFECT OF IRRADIATION ON THE PROPERTIES OF WELDS IN HIGH ALLOY
STEELS -U-
AUTHOR--(05)-VCTINGV, S.N., KAZENNOV, YU.I., AGAPOVA, N.P., PALCHUK, N.YU.,
PRUKHLEROV, V.I.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, SVAROCHENOYE PROIZVODSTVO, NO 3, 1970, PP 4-6
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--HIGH ALLOY STEEL, ALLOY DESIGNATION, MECHANICAL PROPERTY,
BIBLIOGRAPHY, IRRADIATION, NUCLEAR METALLURGY, WELD JOINT, METAL TEST,
WELDING/(U)GKH16N15M3B STAINLESS STEEL, (U)OOKH16N15M3B STAINLESS STEEL,
(U)GKH20N40B STAINLESS STEEL, (U)IKH13M2BFR STAINLESS STEEL, (U)UMD5
STAINLESS STEEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1303 STEP NO--UR/0135/70/000/003/0004/0006
CIRC ACCESSION NO--AP0123262
UNCLASSIFIED

USSR

BOTINOV, S. N. et al, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Tests conducted at 20°C showed that strength properties of all samples increased after irradiation; plasticity decreased. The tensile and yield strengths of weld metals with an austenitic structure increased to a lesser degree than those of the base metals. The mechanical properties of all samples at 350°C did not differ from those of the base metals. A decrease in tensile and yield strength with a simultaneous decrease in plasticity was observed in samples with an austenitic structure in tests conducted at 650°C. These decreases were especially noticeable in irradiated samples made from 40% Ni steel. The possible cause of the sharp decline in the intergrain strength and plasticity observed at 650°C in the irradiated metal with high nickel content is suggested. Orig. art. has: 2 figures, 4 tables, and 5 references.

2/2

Welding

A

USSR

UDC 621.791.053.002.612:658.356

BOTINOV, S. N., KAZENNOV, YU. I., AGAZOVA, N. P., PAL'CHUK, N. YU. (Candidates of Technical Sciences), PROKHOROV, V. I., REVIZNIKOV, L. I., BOBYLEV, A. P., KRASINA, T. A., KRYLOV, YE. A., BALASHOV, V. D., ZINKOVSKIY, V. I., SYCHEV, R. S. (Engineers)

"Effect of Irradiation on the Properties of Welds of High-Alloy Steels and Alloys"

Moscow, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Abstract: The effect of neutron irradiation on the short-term mechanical properties of basic metals and welds from OOKh16N15M38, OKh16N15M38, and OKh20N40S austenitic steels and IKh132BFR ferrite-martensite steel was investigated. The mechanical properties were determined on samples cut in the longitudinal direction from argon-arc welds using an infusible electrode. The samples were irradiated in the active zone of a reactor at about 100°C. The theoretical neutron flux density was 10^{15} neutron/cm². sec. Some samples received a dose of 2.8×10^{21} neutron/cm², while others received a dose of 4.3×10^{21} neutron/cm². The mechanical properties were determined on UMD-5 tensile testing machines at air temperatures of 20, 350, and 650°C.

USSR

UDC 669.14.018.8:620.192.63

SAVKINA, L. YA., LAZAREVA, N. A., FEL'DGANDLER, E. G., and AGAPOVA, N. P.

"Tendency to Intercrystalline Corrosion of Low-Carbon Steels Containing Chromium and Nickel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 2, 1973, pp 55-57

Abstract: Effects of contents of carbon, nickel, chromium, molybdenum, tungsten, and niobium at relations Nb/C=5, 7, 17, and 20 On the tendency of low-carbon steel containing chromium and nickel to intercrystalline corrosion was experimentally investigated by the AM(GOST 6032-52) method on specimens water quenched from 1050°C and tempered at 500-800°C for 0.25-1000 hrs. The 000Kh16N20 steel was not inclined to intercrystalline corrosion at carbon content $\leq 0.08\%$ or by niobium presence according to Nb/C ≥ 17 . Alloying with Mo and W at the rate of about 2% diminishes somewhat the tendency of the steel to intercrystalline corrosion. The latter appears at higher temperatures. The higher the nickel content the lower the allowable carbon content in the steel at which intercrystalline corrosion is absent. Five figures, one table, six bibliographic references.

1/1

USSR

UDC: 621.317.733.011.4

AGAPOVA, N. A., ZAKHAREVICH, Yu. I.

"An Instrument for Measuring Capacitance on High Frequencies"

Elektron. tekhnika. Nauchno-tekhn. sb. Kontrol'no-izmerit. apparatury (Electronic Technology. Scientific and Technical Collection. Monitoring and Measuring Equipment), 1970, vyp. 2(20), pp 45-48 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A376)

Translation: The authors study one of the possible circuit designs for an automatic digital bridge used for measuring the capacitance of condensers. The bridge combines the method of discharge balancing with the method of scanning balancing. Problems of speed and stability of operation are considered. A block diagram of a working model of the instrument is given. Resumé.

1/1

AA0039788

AUTHORS: Agapov, Yu. A.; Gayvoronskiy, A. G.; Yevdokimenko, A. I.; Yelyakov,
I. I.; Kovgan, P. A.; Malkin, Ya. Z.; Polyvyanny, I. R.;
Ponamarev, V. D.

Chimkentskiy Ordena Lenina Svintsovy Zavod imeni M. I. Kalinina, Gosudarstvennyy
Nauchno-Issledovatel'skiy Institut Tsvetnykh Metallov i Institut Metallurgii
i Obogashcheniya AN Kazakhskoy SSR

2/2

19741101

AA0039788- Agapov, Yu.A.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3-70

236766 SMELTING OF ORES, CONCENTRATES AND WASTE PRODUCTS from production of non-ferrous metals in shaft furnaces, is modified by feeding hot metal gases previously mixed with cold or hot air or oxygen-enriched air through nozzles or burners situated above the level of the tuyeres. This enables the costs of the process to be reduced and production capacity of the furnace to be increased. 1.2.64. as 881159/22-2. Yu.A.AGAPOV et al. Chimkent Sec. M.I. Kalinin Lead Works, Non-Ferrous Metals Res. Inst. and Metallurgy & Ore Enrichment Inst. Acad. Sciences Kazakh SSR. (10.6.69.) Bul. 7/3.2.69 Class 40a. Int. Cl. C27b.

no 18

1/2

19741100

Luminescence

(8)

USSR

UDC 661.143:546.431'821'185(088.8)

GUGEL', B. M., LODYGIN, N. A., GOLUBEV, I. F., KHIZHA, V. S., BLYAKHMAN, E. A., KUTSENKO, N. A., SIDOROV, M. D., ZVYAGIN, V. B., VAKHRAMOV, V. P., AGAPOV, V. I., GARKUSHA, V. A., KHUSAINOVA, R. S.

"Phosphor for Low-Pressure Luminescent Tubes"

USSR Author's Certificate No 336342, filed 19 May 70, published 22 May 72 (from RZh-Khimiya, No 2(II), Feb 73, Abstract No 2L148P)

Translation: In order to increase the light yield of the tubes, the proposed phosphor includes the following: barium-titanium phosphate, calcium halophosphate, strontium and magnesium orthophosphate and magnesium fluorogermanate. The barium-titanium phosphate, the calcium halophosphate, the strontium orthophosphate, magnesium orthophosphate and magnesium fluorogermanate are introduced in the following proportions by weight: 4-6:2.5-4:0.4-0.8:0.13-0.25 respectively. As an example, let us take weighed samples of 4.36 kg of barium-titanium phosphate, 3.84 kg of calcium halophosphate, 0.40 kg of magnesium-strontium orthophosphate and 0.24 kg of magnesium fluorogermanate. Put them in a porcelain cylinder and mix for 1 hour. A suspension is prepared from the mixture obtained and it is applied to the tubes.

1/1

USSR

UDC 539.3:534.1

AGAPOV, V. I., KUDINOV, A. N., MERKULOV, L. I.

"Study of the Stability of Reinforced Shells Under the Effect of Nonuniforming Gentle Pressure"

V sb. Materialy z-y Nauch. konf. Tomsk. un-ta po mat. i mekh. Vyp. 2 (Materials of the Third Scientific Conference of Tomsk University for Mathematics and Engineering. Vyp. 2--collection of works), Tomsk, Tomsk University, 1973, p 107 (from EZh--Mekhanika, No 6, Jun 73, Abstract No 6V255)

Translation: An abstract is given of a paper in which a study was made of circular cylindrical shells reinforced with framing and loaded under external pressure which is not uniform with respect to the circle. The shell was considered as structurally orthotropic. The eccentricity of arrangement of the frames was taken into account. It was proposed that the shell material can be beyond the elastic limit. In this case the problem was solved on the basis of the theory of small elastic-plastic deformations. The initial state of the shell was considered momentless. The solution was compared with the experiment in which tests were run on 50 shells made of steels 3, 12L12N9 and duralumin D16AT. The effect of the nature of placement of the frames on the stability loss process and the magnitude of the critical pressure was estimated.

1/1

2/2 C14

UNCLASSIFIED

PROCESSING DATE--01 JUL 70

CIRC ACCESSION NO--AP0105719

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TYPE VVZ-12 10 KV (NOMINAL VALUE) PROTECTIVE SWITCH FOR INTERNAL INSTALLATION, PRODUCED BY THE Leningrad Plant "ELEKTROAPPARAT", IS PART OF THE ELECTRICAL CIRCUIT OF THE SCIENTIFIC RESEARCH CENTER FOR TESTING HIGH VOLTAGE APPARATUS. IT IS USED AS A PROTECTIVE SWITCH DURING THE TESTS. THE SWITCH IS A COMPLEX OF THREE SEPARATE POLES AND TYPE SHRPF-3 DISTRIBUTION HEADS CONNECTED PNEUMATICALLY IN A SINGLE UNIT. MODERNIZATION OF THE VVZ-12 SWITCH ELIMINATED DEFECTS DEVELOPED IN OPERATION, INCREASED THE RELIABILITY OF OPERATION, THE USEFUL LIFE, AND THE ECONOMY OF OPERATION. THE AIR BLAST VALVE AND THE BASIC ARC QUENCHING CHAMBER UNDERWENT MODERNIZATION. THE PROCESS OF MODERNIZATION IS DISCUSSED IN DETAIL AND IS ILLUSTRATED WITH FOUR DETAILED DRAWINGS KEYED TO THE EXPLANATION.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--SCIENTIFIC RESEARCH CENTER FOR TESTING HIGH VOLTAGE APPARATUS -U-
AUTHOR-(03)-LEVCHENKO, V.T., STEKOLSHCHIKOV, A.A., AGAPOV, S.M.
COUNTRY OF INFO--USSR *A* —
SOURCE--MOSCOW, ELEKTRICHESKIYE STANTSII, NR 3, MAR 70, PP 78-81
DATE PUBLISHED----MAR70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--CIRCUIT DESIGN, ELECTRIC SWITCH/(U)VVZ12 ELECTRIC SWITCH

CONTROL AND INFO--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1938/0614 STEP NO--06/1106/70/107/113/0078/1001
CIRC ACCESSION NO--AP0106719
UNCLASSIFIED

Pulse Technique

USSR

UDC 621.374

AGAPOV, G. V. and RAEINOVICH, G. V.

"Estimating the Interference Resistance of Real Storage Elements of Pulse Signals"

Moscow, Radiotekhnika, Vol 26, No 3, 1971, pp 53-57

Abstract: The authors propose a methodology for calculating a generating function for the probability of the first operation of a real storage element under the effect of any of a set of code groups which result in exceeding the threshold. This was achieved by introducing a concept on critical points for a set of code groups. The proposed methodology makes it possible to simplify significantly the procedure for calculating generating functions. The mean value and dispersion of the number of tests up to the first operation of the storage element which reacts to a set of code groups are reduced by approximately m and m^2 times for small values of p in comparison with the same characteristics in the case of an ideal storage element where p is the probability of the appearance of statistically independent, identical pulses of the input signal with a determined cadence interval. These results must be considered in estimating the interference resistance of real storage elements for pulse signals. Original article: one figure, 10 formulas, and seven bibliographic entries.

USSR

GUREVICH, V. E. et al., USSR Author's Certificate No 331322

output of the source of synchronizing pulses. 2. A modification of this analyzer distinguished by the fact that the effect which the degree of channel loading has on the result is eliminated by connecting a silent signal code group recognition unit to the input of the device. The output of the recognition device is connected through a channel time separation device to the inputs of threshold channel accumulators of a predetermined number of pulses and to the inputs of channel coincidence circuits. The channel time separation device is controlled from the source of synchronizing pulses. The controlling inputs of the channel coincidence circuits are connected to the potential outputs of the corresponding channel accumulators, and the output signals from the coincidence circuits are fed to the input of the silent signal control group counter, the input of each channel accumulator being connected through an inverter to the reset circuit of this accumulator. The pulse outputs of the channel accumulators are connected to the input of the counter for the total number of silence intervals.

2/2

- 50 -

USSR

UDC: 621.317.757

GUREVICH, V. E., AGAPOV, G. V., BORUKHOVICH, A. P., DURETS, Ye. Ya., RABINOVICH, G. V., Leningrad Electrical Engineering Institute of Communications imeni Professor M. A. Bonch-Bruyevich

"An Analyzer of the Correlation Characteristics of a Pulse-Code Signal"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy. Sovarnyye Znaki, No 9, Mar 72, Author's Certificate No 331322, Division G. Filed 6 Nov 69, published 7 Mar 72, p 13⁴

Translation: This Author's Certificate introduces: 1. An analyzer of the correlation characteristics of a pulse-code signal in systems for data transmission by uniform codes. The analyzer contains a controllable delay unit, a coincidence circuit, a source of synchronizing pulses and a pulse counter. As a distinguishing feature of the patent, the device is designed for separate measurement of the correlation factor of two signal trains spaced by the same time interval but located in different places of the code groups. Connected between the output of the coincidence circuit and the input of the pulse counter is an additional coincidence circuit whose controlling input is connected through an additional controllable delay unit to the

ILLEGIBLE

ILLEGIBLE

2/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
 CIRC ACCESSION NO--AP0054962
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ORDER TO CONFIRM THE
 ESTABLISHMENT OF FULL EQUIL. IN THE LN(NO SUB3) SUB3-NA SUB2 MOO SUB4-H
 SUB2 O SYSTEM, THE ISOMOLAR SERIES OF THE MIXTS. OVER A PERIOD OF 1 AND
 2 WEEKS, AS WELL AS OVER 1 AND 3 MONTHS, FROM THE INSTANT OF THEIR
 PREPN. WERE STUDIED CONDUCTIOMETRICALLY AND POTENTIOMETRICALLY. THE
 MIN. IN ELEC. COND. CORRESPONDS TO MIXTS. WITH THE RATIO (LN(NO SUB3)
 SUB3): (NA SUB2 MOO SUB4) EQUALS 1:2. THIS ATTESTS TO THE FORMATION OF
 DOUBLE MOLYBDATES OF RARE EARTH METALS. INVESTIGATION OF THE LN(NO
 SUB3) SUB3-NA SUB2 WO SUB4-H SUB2 O SYSTEM INDICATES THE FORMATION OF
 SIMPLE TUNGSTATES OF RARE EARTH METALS. X RAY ANAL. OF DOUBLE
 TUNGSTATES SHOWS THAT THEY BEHAVE ANALOGOUSLY TO DOUBLE MOLYBDATES. AN
 ENDOTHERMAL EFFECT AT 180-200DEGREES CORRESPONDS TO THE LOSS OF WATER.
 THE EXOTHERMAL EFFECT AT 400-480DEGREES CORRESPONDS TO THE CRYSTN. OF
 THE COMPOS. NALN(WO SUB4) SUB2 TIMES 0.5H SUB2 O, AND THE EXOTHERMAL
 EFFECT AT 560-575DEGREES CORRESPONDS TO THE CRYSTN. OF NALN(WO SUB4)
 SUB2.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--DOUBLE MOLYBDATES AND TUNGSTATES OF RARE EARTH ELEMENTS WITH SODIUM
-U-
AUTHOR-(04)-GOLUB, A.M., AGANYAZOV, K.S., KISEL, N.G., MOKHOSOEYEV, M.V.
COUNTRY OF INFO--USSR *A*
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. AMTER. 1970, 6(1), 170-2
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--MOLYBDATE, TUNGSTATE, RARE EARTH ELEMENT, SODIUM, X RAY
ANALYSIS

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/0166 STEP NO--UR/0363/70/006/001/0170/0172
CIRC ACCESSION NO--AP0054962
UNCLASSIFIED

USSR

UDC 541.6:547.26'118

REMIZOV, A. B., KURAMSHIN, I. YA., AGANOV, A. V., and BUTENKO, G. G., Kazan State University imeni V. I. Ul'yanov-Lenin

"Rotational Isomerism and Internal Rotation About the P-O, the P-S, and the P-C Bond in $\text{CH}_3\text{XP}(=\text{Y})(\text{CH}_3)_2$ and $\text{CH SP}(=\text{Y})(\text{C}_2\text{H}_5)_2$ for (X, Y = O, S)"

Moscow, Doklady Akademii Nauk SSSR, Vol 208, No 5, 1973, pp 1118-1120

Abstract: IR and NMR spectra and dipole moments were used to study the influence of the groups attached to the P atom on the nature of the internal rotation around the P-X bond. IR spectra are shown for the title compound in the gaseous, liquid, and solid phases and in nonpolar and polar solutions. A study of the temperature effect showed that O-methyl dimethylphosphinate and its thione and thiol analogs remain predominately in one configuration. A variety of constants are given for the studied compounds.

1/1

USSR

UDC 547.341+547.772.2

PUDOVIK, A. N., GAREYEV, R. D., and AGANOV, A. V., Kazan State University

"1,3-Bipolar Addition of Diazomethane to Esters of Unsaturated Phosphonic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 5, May 1971, pp 1017-1022

Abstract: 1,3-Bipolar addition of diazomethane to esters of vinyl-, propenyl- and allylphosphonic acids yields the corresponding Δ^2 -pyrazolines. The prototropic isomerism which converts Δ^1 -pyrazolines to the Δ^2 form is spontaneous in this reaction sequence. The condensed form of the Δ^2 isomer forms associates at the intermolecular hydrogen bonds. All structures were confirmed by IR and NMR spectroscopy; this data and physical data on the specific compounds prepared in this work are presented.

1/1

USSR

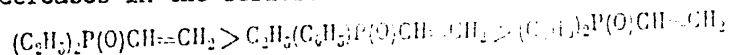
UDC 547.341+547.772.2

PUDOVIK, A. N., GAFEEV, R. D., AGANOV, A. V., RAYEVSKAYA, O. E., and STABROVSKAYA, L. A., Kazan State University

"The Reaction of Diphenyldiazomethane with Tertiary Vinyl- and Allylphosphine Oxides"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 5, May 1971, pp 1003-1016

Abstract: The thermal reaction (75°-80°) of diphenyldiazomethane with tertiary phenylphosphine oxides proceeds with the formation of the corresponding Δ' -pyrazoline intermediates. The further reaction sequence, either reduces the pyrazolines to the related cyclopropane derivatives liberating nitrogen, or forms the isomeric Δ'' -pyrazolines. The comparative reactivity of oxides with diphenyldiazomethane decreases in the series:



All structures were confirmed by IR, UV and NMR spectroscopy.

1/1

USSR

UDC 547.341

PUDOVIK, A. N., GAREYEV, R. D., AGANOV, A. V., and STABROVSKAYA, L. A.,
Kazan State University imeni V. I. Ul'yanov-Lenin

"The Reaction of Dimethoxyisopropenyl Phosphonate with 2-Diazopropane"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 5, May 1971, p 1173

Abstract: 3-Methyl-3-dimethoxyphosphinyl-5,5-dimethyl- Δ' -pyrazoline (I) is formed at room temperature by the reaction of the dimethyl ester of isopropenylphosphonic acid with 2-diazopropane, with a yield of 73.4%. No isomerization of Δ' -pyrazoline takes place. Compound I is easily converted to 3-diphenoxyphosphinyl-3-methyl-5,5-diphenyl- Δ' -pyrazoline, although, the geminal phenyl radicals are unstable at temperatures higher than 50°.

USSR

UDC 547.341

PUDOVIK, A. N., GAREYEV, R. P., STABROVSKAYA, L. A., and AGANOV, A. V.,
Kazan' State University Imeni V. I. Ul'yanov-Lenin

"1,3-Dipolar Cycloaddition of 9-Diazofluorene to Unsaturated Organic Phosphorus Compounds"

Leningrad, Zhurnal Obshchey Khimii, Vol. 43, (105), No 6, Jun 73, pp 1236-1240

Abstract: The reactions of 9-diazofluorene with unsaturated organic phosphorus compounds at room temperature pass through the formation of intermediate products -- Δ^1 -pyrazolenes, which, depending on experimental conditions, break down to nitrogen and cyclopropene derivatives, or isomerize to Δ^2 -pyrazolenes. In comparison to diphenyldiazomethane, 9-diazofluorene is less reactive in regard to its enophilic activity in the reactions of 1,3-dipolar cycloaddition to organic phosphorus dipolarophiles. When 9-diazofluorene was reacted with dimethoxyvinylphosphonate at about 80°C, the product was 1-dimethoxyvinyl-2-biphenylenecyclopropane.

1/1

USSR

UDC 547.26'118

PUDOVIK, A. N., GAREYEV, R. D., REMIZOV, A. B., AGANOV, A. V., YEVSTAF'YEV, G. I., and SHITIL'MAN, S. Ye., Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Aldol" Type Addition Products of Diazoacetic Acid Esters With α -Ketophosphonates"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 3, Mar 73, pp 559-567

Abstract: A mixture of diethoxyacetophosphonate and ethyldiazoacetate was kept two weeks in the dark at room temperature, poured into water, and decanted, the "aldol" type product -- diethoxy- α -hydroxy- α -carboethoxy-diazomethylethylphosphonate -- being isolated from the oily residue. A detailed structural analysis of the product has been carried out using PMR, IR and UV spectroscopical data.

1/1

Inorganic Compounds

USSR

UDC 546.66.32.776+546.66.35.776

GOLUB, A. M., PEREPELITSA, A. P., MAK SIN, V. I., AGANIYAZOV, K., Department of Inorganic Chemistry, Kiev State University imeni T. G. Shevchenko

"Dimolybdates of Rare Earth Elements and Alkali Metals"

Ivanovo, IVUZ: Khimiya i Khimicheskaya Tekhnologiya, Vol 14, No 3, 1971, pp 328-331

Abstract: By measuring pH, electrical conductivity and solubility, the authors studied the ternary system $R(NO_3)_3-K_2MoO_4-H_2O$ where R is yttrium and scandium. It is found that two compounds are formed: $R_2(MoO_4)_3$ and $KR(MoO_4)_2$. Dimolybdates with the general formula $MR(MoO_4)_2$, where M is K and Rb, and R is Sc, Y, Tb and Er were synthesized from aqueous solutions for the first time. The thermographic behavior of these compounds was studied (the melting point and temperature of crystallization of x-ray amorphous residues were determined). Doby powder patterns were used for determining the interplanar spacing of $KY(MoO_4)_2$.

2/2 008

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054953

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHASE COMPN. OF FERROCHROMIUM SLAGS WAS DETD. BY CHEM. AND MINERALOGICAL ANAL. THE CALCN. WAS BASED ON THE FACT THAT MGO DOES NOT TAKE PART IN THE CR SPINEL COMPLEX AND FORMS A PART OF THE ORTHOSILICATES. THE OXIDES OF THE R SUB2 O SUB3 TYPE DO NOT DISSOLVE IN ORTHOSILICATES, AND THEY ARE DISTRIBUTED BETWEEN THE CR SPINEL AND THE GLASS. THE HIGH CONTENT OF MICROCHROMITE IN THE CR ORE AND THE EXCHANGE OF AL SUB2 O SUB3 AND CHROMIC OXIDE IN THE SPINEL PHASE OF CARBONIFEROUS FERROCHROMIUMS NEG. AFFECT THE REON. THE ELEC. COND. IS IMPROVED BY AN INCREASED VALUE OF THE RATIO MGO:AL SUB2 O SUB3.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PHASE COMPOSITION OF CARBONIFEROUS FERROCHROMIUM SLAGS DURING
OPERATIONS USING MAGNESIAN CHROMIUM ORES -U-
AUTHOR--(05)-KATS, M.SH., ZHURAVLEV, V.M., AGANICHEV, P.V., MELNICHENKO,
N.V., UMAROV, K.U.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1), 74-9
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, CHEMISTRY
TOPIC TAGS--FERROCHROMIUM, METAL ORE, ELECTRIC CONDUCTIVITY, SPINEL,
MAGNESIUM COMPOUND, CHROMIUM COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/0157 STEP NO--UR/0370/70/000/001/0074/0079
CIRC ACCESSION NO--AP0054953
UNCLASSIFIED

USSR

UDC: 621.373.826:53

AGANBEK'YAN, K. A., ZRAZHEVSKIY, A. Yu., KOLOSOV, M. A., SOKOLOV, A. V.

"Absorption of Submillimeter Radiation in Pure Water Vapor"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tenzisy dokl. (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses--collection of works) "Nauka," 1972, pp 39-38 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10D362)

Translation: Results are given of the calculation on a computer of the absorption in the submillimeter wavelength range as a function of pure water vapor pressure. Comparison of the results of the calculation with the experimental data in the transparency windows of 0.73, 0.45, 0.36, and 0.29 mm shows that the computed values are below the measured ones. One illustration, one table, bibliography of seven. A. L.

USSR

UDC 678.742.2:66.018.86.01:53

VINOGRADSKAYA, Ye. L., AGAMALYAN, S. G., and VDOVINA, A. L.

"Influence of γ -Radiation on the Physical Mechanical Properties of Polyethylene and Polycarbonate"

Moscow, Plasticheskiye Massy, 7, 1973, pp 10-12

Abstract: A study was made of the influence of γ -radiation on the molecular structure of high density polyethylene (HDPE) and polycarbonate (PC). Increasing the dose to 25 millirads resulted in an increase in the stability limit during stretching for HDPE; increasing the dose from 25 to 200 millirads resulted in a decrease in σ_v . Density, module of elasticity, hardness, and fatigue stability for HDPE in general increased with increasing dose. The molecular weight and fatigue resistance decreased for PC. Values for other parameters are given. The radiation of HDPE results in "linking" processes and leads to the breakdown of spherulite formation, and to the breakup and subsequent compaction of the structural elements. In PC, however, irradiation results in destructive processes leading to the fragmentation of the polymers.

1/1

Acc. Nr

AP0024833

Abstracting Service:

CHEMICAL ABST. 3-70

Ref. Code

UR0218

42289t Effect of the region of cultivation on the nucleic acid content in seed germs from summer strains of wheat. Koksharova, T. A.; Nikitina, E. I.; Agamalova, S. R.; Budnitskaya, E. V.; Stoletov, V. N. (Moscow State Univ., Moscow, USSR). *Biokhimiya* 1969, 34(5), 915-20 (Russ). The contents of nucleic acids, total P, acid-sol. P, lipid P, nucleic acid P, total N, purine N, and protein N, were studied in the dry seed germs of 2 spring varieties of wheat (Saratovskaya 29 and Lutescens 758) obtained from 8 and 4 different geographical districts (related to Volga region, Ural, Kazakhstan, and Siberia) of USSR. The contents of nucleic acids as well as those of N and P fractions depended on both the geography of the localities and growth conditions at these localities. Least variability was observed in the contents of nucleic acids, while the greatest variability was observed in the contents of acid-sol. and total P and total N.

J. Klenha

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19651614

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2/2 025 UNCLASSIFIED PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AA0126977
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE MOVEMENT OF
AMALGAM ALONG THE SURFACE OF THE HG BY THE ACTION OF DIFFERENT SURFACE
TENSION FORCES IN DIFFERENT STREAMS OF HG IS APPLIED FOR TRANSPORTING
THE AMALGAM.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--TRANSPORT OF AMALGAM IN MERCURY CELL ELECTROLYSIS -U-

AUTHOR-(02)-AGALTSOV, A.M., MYAKISHEVA, T.D.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,372

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(9)

DATE PUBLISHED--03MAR70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--AMALGAM, MERCURY, METALLURGIC PATENT, CHEMICAL PATENT,
ELECTROLYSIS, ELECTROLYTIC CELL, SURFACE TENSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/1446

STEP NO--UR/0482/70/000/000/0000/0000


CIRC ACCESSION NO--AA0126977

UNCLASSIFIED

Circuit Theory

USSR

UDC 621.391.1:621.391.7

AGALOV, G. V. 

"Generating Function of the Probability of Formation of One of a Set of Code Groups"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 118-123 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No SA69)

Translation: So-called derivative functions are introduced for the solution of certain problems connected with analysis of a linear signal in a PCM communications system. One such problem is determination of at least one code combination from the set of them. The generating function of this probability is found. The bibliography has three entries.

USSR

AGALETSKIY, P. N., and KOLOSOV, A. N., Izmeritel'naya Tekhnika, No 2, Feb 73, pp 41-43

This dependence is for α -iron linear, for NaCl it is a 2nd order function. Ultrasonic measuring transducers of pressure are recommended as starting point in developing checking means for measuring high hydrostatic pressures. One figure, one table, two bibliographic references.

2/2

USSR

UDC 534.321.9:521.727

AGALETSKIY, P. N., and KOLOSOV, A. N.

"Metrological Investigation of a Precision Ultrasonic Measuring Transducer of High Hydrostatic Pressures"

Moscow, Izmeritel'naya Tekhnika, No 2, Feb 73, pp 41-43

Abstract: Results are presented of an experimental investigation of measuring transducers of pressure in the form of rods of NaCl single crystal and α -iron, in which is used the interrelation between hydrostatic pressure and the relative passing duration of elastic waves through the rod. On the basis of experimental data, it is assumed that the character of graduated dependence of investigated measuring transducers remains unchanged at pressures up to $15 \cdot 10^8$ Pascal. In small-scale specimens of NaCl and α -iron, subjected to ultrasonic irradiation, a very stable dependence appears between the passing period of elastic waves through the specimen and the hydrostatic pressure.

3/3 016

UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0108411

ABSTRACT/EXTRACT--AT GREAT ALTITUDES THE FORM OF THE RADIATION BELT ON THE EARTH'S DAYTIME SIDE DIFFERS FROM ITS CONFIGURATION ON THE NIGHTTIME SIDE DUE TO DISTORTION OF THE EARTH'S MAGNETIC FIELD BY THE SOLAR WIND. IT HAS ALSO BEEN ESTABLISHED THAT THE EARTH'S RADIATION BELT IS SUBJECT TO VARIOUS CHANGES ASSOCIATED WITH SOLAR AND MAGNETIC ACTIVITY AND WITH VARIATIONS IN COSMIC RADIATION.

UNCLASSIFIED

89

2/3 016

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0108411

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPACE RESEARCH CONDUCTED ON A BROAD FRONT DURING THE LAST 10-12 YEARS BY SOVIET AND AMERICAN SCIENTISTS HAS MADE IT POSSIBLE TO ESTABLISH THAT THE EARTH IS SURROUNDED BY REGIONS OF CIRCUMTERRESTRIAL SPACE WITH A HIGH DENSITY OF CHARGED PARTICLES. THESE REGIONS CONSTITUTE THE INNER AND OUTER RADIATION BELTS. THE INNER BELT CONSISTS PRIMARILY OF PROTONS WHOSE ENERGY IS TENS AND HUNDREDS OF ELECTRON VOLTS. THE BOUNDARIES OF THE INNER BELT ARE 500-1, 600KM AND 4,000-6,000 KM FROM THE EARTH'S SURFACE. THE OUTER BELT BEGINS AT A DISTANCE OF ABOUT 10,000-11,000 KM AND EXTENDS TO AN ALTITUDE OF 40,000-50,000 KM FROM THE EARTH'S SURFACE. IT CONSISTS PRIMARILY OF ELECTRONS WITH A RELATIVELY LOW ENERGY: 300-1,000 THOUSAND EV. HOWEVER, INVESTIGATIONS MADE DURING THE LAST TWO OR THREE YEARS HAVE INTRODUCED REFINEMENTS INTO THESE DATA. IT HAS NOW BEEN ESTABLISHED THAT THE INNER AND OUTER RADIATION BELTS ARE INDIVIDUAL LINKS IN THE GENERAL RADIATION REGION AROUND THE EARTH, THAT IS, A UNIFIED RADIATION BELT IN WHICH THERE IS NO NEUTRAL SEPARATING ZONE. THE OUTER ZONE (OUTER RADIATION BELT) IS FORMED BY SOLAR WIND ELECTRONS. AT SHORT DISTANCES IN THE REGION OF THE INNER ZONE (INNER BELT) ONE CAN STILL DETECT REMNANTS OF THE ARTIFICIAL RADIATION BELT CREATED BY THE DETONATION OF THE HIGH ALTITUDE "STARFISH" NUCLEAR BURST OF 1962. AT THE SAME TIME, IN THIS ZONE THERE ARE ALSO POWERFUL ELECTRON FLUXES WITH ENERGIES 20-40 KEV OF NATURAL ORIGIN. IN ADDITION, HERE ONE CAN OBSERVE PROTONS WHOSE ENERGY VARIES IN THE RANGE FROM 0.1 TO 30 MEV OR MORE.

UNCLASSIFIED

1/3 016 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--NEW DATA ON THE EARTH'S RADIATION BELTS -U-
AUTHOR--AGALAKOV, V.S.
COUNTRY OF INFO--USSR A
SOURCE--MOSCOW, PRIRODA, NO 4, 1970, P 109
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, ATMOSPHERIC SCIENCES
TOPIC TAGS--RADIATION BELT, CHARGED PARTICLE, PROTON, ELECTRON

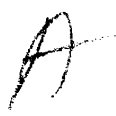
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0024 STEP NO--UR/0026/70/000/004/0109/0109
CIRC ACCESSION NO--AP0108411
UNCLASSIFIED

ILLEGIBLE

Circuit Theory

USSR

UDC 621.391.1:621.391.7

AGALOV, G. V. 

"Generating Function of the Probability of Formation of One of a Set of Code Groups"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 118-123 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No SA69)

Translation: So-called derivative functions are introduced for the solution of certain problems connected with analysis of a linear signal in a PCM communications system. One such problem is determination of at least one code combination from the set of them. The generating function of this probability is found. The bibliography has three entries.

USSR

AGALETSKIY, P. N., and KOLOSOV, A. N., Izmeritel'naya Tekhnika, No 2, Feb 73, pp 41-43

This dependence is for α -iron linear, for NaCl it is a 2nd order function. Ultrasonic measuring transducers of pressure are recommended as starting point in developing checking means for measuring high hydrostatic pressures. One figure, one table, two bibliographic references.

2/2

UDC 534.321.9:531.757

USSR

AGALETSKIY, P. N., and HOLOSOV, A. N.

"Metrological Investigation of a Precision Ultrasonic Measuring Transducer of High Hydrostatic Pressures"

Moscow, Izmeritel'naya Tekhnika, No 2, Feb 73, pp 41-43

Abstract: Results are presented of an experimental investigation of measuring transducers of pressure in the form of rods of NaCl single crystal and α -iron, in which is used the interrelation between hydrostatic pressure and the relative warping duration of elastic waves through the rod. On the basis of experimental data, it is assumed that the character of graduated dependence of investigated measuring transducers remains unchanged at pressures up to $15 \cdot 10^8$ Pascal. In small-scale specimens of NaCl and α -iron, subjected to ultrasonic irradiation, a very stable dependence appears between the warping period of elastic waves through the specimen and the hydrostatic pressure.

3/3 016

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0108411

ABSTRACT/EXTRACT--AT GREAT ALTITUDES THE FORM OF THE RADIATION BELT ON THE EARTH'S DAYTIME SIDE DIFFERS FROM ITS CONFIGURATION ON THE NIGHTTIME SIDE DUE TO DISTORTION OF THE EARTH'S MAGNETIC FIELD BY THE SOLAR WIND. IT HAS ALSO BEEN ESTABLISHED THAT THE EARTH'S RADIATION BELT IS SUBJECT TO VARIOUS CHANGES ASSOCIATED WITH SOLAR AND MAGNETIC ACTIVITY AND WITH VARIATIONS IN COSMIC RADIATION.

UNCLASSIFIED

2/3 016

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0108411

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPACE RESEARCH CONDUCTED ON A BROAD FRONT DURING THE LAST 10-12 YEARS BY SOVIET AND AMERICAN SCIENTISTS HAS MADE IT POSSIBLE TO ESTABLISH THAT THE EARTH IS SURROUNDED BY REGIONS OF CIRCUMTERRESTRIAL SPACE WITH A HIGH DENSITY OF CHARGED PARTICLES. THESE REGIONS CONSTITUTE THE INNER AND OUTER RADIATION BELTS. THE INNER BELT CONSISTS PRIMARILY OF PROTONS WHOSE ENERGY IS TENS AND HUNDREDS OF ELECTRON VOLTS. THE BOUNDARIES OF THE INNER BELT ARE 500-1, 600KM AND 4,000-6,000 KM FROM THE EARTH'S SURFACE. THE OUTER BELT BEGINS AT A DISTANCE OF ABOUT 10,000-11,000 KM AND EXTENDS TO AN ALTITUDE OF 40,000-50,000 KM FROM THE EARTH'S SURFACE. IT CONSISTS PRIMARILY OF ELECTRONS WITH A RELATIVELY LOW ENERGY: 300-1,000 THOUSAND EV. HOWEVER, INVESTIGATIONS MADE DURING THE LAST TWO OR THREE YEARS HAVE INTRODUCED REFINEMENTS INTO THESE DATA. IT HAS NOW BEEN ESTABLISHED THAT THE INNER AND OUTER RADIATION BELTS ARE INDIVIDUAL LINKS IN THE GENERAL RADIATION REGION AROUND THE EARTH, THAT IS, A UNIFIED RADIATION BELT IN WHICH THERE IS NO NEUTRAL SEPARATING ZONE. THE OUTER ZONE (OUTER RADIATION BELT) IS FORMED BY SOLAR WIND ELECTRONS. AT SHORT DISTANCES IN THE REGION OF THE INNER ZONE (INNER BELT) ONE CAN STILL DETECT REMNANTS OF THE ARTIFICIAL RADIATION BELT CREATED BY THE DETONATION OF THE HIGH ALTITUDE "STARFISH" NUCLEAR BURST OF 1962. AT THE SAME TIME, IN THIS ZONE THERE ARE ALSO POWERFUL ELECTRON FLUXES WITH ENERGIES 20-40 KEV OF NATURAL ORIGIN. IN ADDITION, HERE ONE CAN OBSERVE PROTONS WHOSE ENERGY VARIES IN THE RANGE FROM 0.1 TO 30 MEV OR MORE.

UNCLASSIFIED

1/3 016 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--NEW DATA ON THE EARTH'S RADIATION BELTS -U-
AUTHOR--AGALAKOV, V.S. *A*
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, PRIRODA, NO 4, 1970, P 109
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, ATMOSPHERIC SCIENCES
TOPIC TAGS--RADIATION BELT, CHARGED PARTICLE, PROTON, ELECTRON

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/0024 STEP NO--UR/0026/70/000/004/0109/0109
CIRC ACCESSION NO--AP0108411
UNCLASSIFIED

USSR

UDC 621.371.029.55

AGALAKOV, V. N.

"Propagation of Spotlight Signals for Observations in the City of Irkutsk"

Moscow, V sb. X Vses. konf po rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972, p 364-367 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A335)

Translation: Results are given of an investigation into the conditions at which spotlight signals (SS) were observed at a frequency of 17 MHz, propagated along tropospheric channels, and of the experimental values of the time of the SS propagation. One illustration, bibliography of three.

USSR

UDC 669.721.372

ZUYEV, N. M., IVANOV, A. B., VINOLOV, V. V., SYALOV, G. N.,
IRTEGOV, N. S., TIKHIN, Ya. N., GALAGOV, V. A.,
SHCHELMONOGOV, A. A., SABUROV, V. F., and KIRILAKKO, I. S.

"Flow Line for Magnesium Production"

Moscow, Tsvetnyye Metally, No 9, Sep 71, pp 36-37

Abstract: An experimental-industrial flow line which uses smelted carnallite as the raw material for the production of magnesium has been established at a Soviet plant. The operation of the flow line is described by reference to a diagram and the distribution of slime (with 20% MgO) by electrolyzers showing the maximum output of slime (up to 6% of its total amount) on the first 3-4 electrolyzers. It is shown that the centralized feeding of diaphragm-type electrolyzers provides a 3-4% increase of magnesium output. To maintain normal temperature conditions and compensate for heat losses, it is necessary to provide for an increase of current intensity and electrolyzer output by 10-12%, in comparison with electrolyzers with individual feeding. Two illustr., three biblio. refs.

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USSR

A UDC: 621.375.4.012.576:621.382.3.23

AGAKHANYAN, T. M.

"Input Stage of a Pulse Amplifier Based on Field-Effect Transistors"

V sb. poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Engineering--collection of works), Vyp. 5, Moscow, "Svyaz", 1970, pp 61-68 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D117)

Translation: The author considers the input stage of a pulse amplifier based on cascade-connected channel transistors. An antinoise correction circuit is analyzed in which feedback is used to reduce distortion of the front in the input circuit to a tolerable level. Relationships are given which can be used to determine the optimum circuit parameters. Bibliography of six titles. Resumé.

USSR

UDC: 621.396.6-181.5

AGAKHANYAN, T. M. (editor)

"Microelectronics. Collection of Articles. No 1"

Mikroelektronika. Sb. statey. Vyp. 1. Mosk. inzh.-fiz. in-t (see English above. Moscow Engineering Physics Institute), Moscow, Atomizdat, 1971, 173 pp, ill. 65 k. (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V167K)

Translation: The collection contains thirteen articles dedicated to a theoretical and experimental study of microelectronic circuits developed at the Moscow Engineering Physics Institute. Considerable attention is given to hybrid microcircuits with the use of distributed RC structures. A number of papers deal with microcircuits based on MOS transistors (including computer elements). N. S.

USSR

UDC: 621.396.6-181.5

AGAKHANYAN, T. M., VASIL'YEV, A. S., GALITSKIY, V. V., DONCHUK, S. D.,
PETROV, G. V.; SMOLKO, G. G.

"Hybrid Circuits Utilizing Thin-Film Distributed RC Structures"

V sb. Mikroelektronika. Vyp. 1 (Microelectronics. No 1--collection of
works), Moscow, Atomizdat, 1971, pp 31-62 (from RZh-Radiotekhnika, No 6,
Jun 71, Abstract No 6V185)

Translation: Results found in development of microelectronic circuits
utilizing thin-film distributed RC structures are taken as a basis for
analysis of the possibilities of constructing a number of amplifiers,
sine-wave generators and relaxation circuits in the form of hybrid micro-
circuits. A number of recommendations are given on making microcircuits.
Thirty-seven illustrations, bibliography of thirty-six titles. N. S.

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USSR

UDC: 621.396.6-181.5

AGAKHANYAN, T. M.

"Principles of the Theory and Design of Transistor Structures in Microelectronics"

V sb. Mikroelektronika. Vyp. 1 (Microelectronics. No 1--collection of works), Moscow, Atomizdat, 1971, pp 5-30 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V187)

Translation: Physical processes in transistor structures are analyzed. Equations are derived for transfer processes. A model of a PN junction is constructed together with equivalent circuits of transistor structures. Bibliography of 27 titles. N. S.

USSR

UIC 621,351

ROMANOV, V. V., ZIYATLY, V. D., AGACHESEV, K. YU.

"Internal Resistance of Chemical Current Sources."

Uch. zap. Azerb. in-~~t~~ nefti i khimii (Scientific Reports of the Azerbaijanian Petroleum and Chemistry Institute), 1971, series 2, No 6, pp 91-92 (from EZhe Khimiya, No 6 (11), Jun 72, Abstract No 61223)

Translation: As a result of analyzing the laws of change in the internal resistance of chemical current sources it was established that the internal resistances determined for any current strength are unsuitable for calculations for other values of the discharge current. The measurements show that different chemical current sources have a different nature of internal resistance with respect to alternating currents. Along with the active component, the internal resistance always contains a reactive component. The total internal resistance as a function of frequency can have a capacitive-inductive, purely inductive or purely capacitive nature.

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- 6 -

USSR

UDC 621.352

ROMANOV, V. V., ZUYATLY, V. D., and AGAGUSEYNOV, K. YU.

"Determining the Components of Internal Resistance of Chemical Sources of Current"

Uch. zap. Azerb. in-t nefti i khimii (Scientific Notes. Azerbaydzhan Institute of Petroleum and Chemistry), 1972, ser. 9, No 1, pp 69-74 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18L149)

Translation: The author describes the calculation of components of internal resistance of chemical sources of current. Frequency dependence of internal resistance is presented for accumulators of all known electrochemical systems, as well as for cells and batteries in the manganese-zinc system. It is shown that the components of internal resistance R , x_1 and x_c can be determined from the curves for their frequency dependences as a function of the total internal resistance. Authors' abstract.

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2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0132424
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING THIOBACILLUS
FERROOXIDANS, THE TITLE EFFECT WAS PRODUCED BY THE APPLICATION OF A
MAGNETIC FIELD TO A BACTERIAL SUBSPENSION OR TO A SOLN. OF FESO SUB4
(1.5 G.-L.) ACIDIFIED WITH H SUB2 SO SUB4 (TO PH 2.4-2.5) AND INOCULATED
WITH BACTERIAL CULTURE. THE MAGNETIC FIELD WAS 150 OE AND WAS APPLIED
FOR 10 SEC, AND THE BACTERIAL PROPAGATION INCREASED BY GREATER THAN 1.5
TIMES (AS COMPARED TO CONTROLS). SIMILARLY, THE REGENERATION OF FE
PRIME3 POSITIVE FROM FE PRIME2 POSITIVE AFTER INOCULATION AND MAGNETIC
FIELD TREATMENT PROCEEDED 1.6-1.7 TIMES FASTER THAN WHEN NO MAGNETIC
FIELD WAS APPLIED.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--IMPROVEMENT OF THE BACTERIAL LEACHING OF COPPER -U-
AUTHOR-(03)-AGAFONOVA, G.S., KLASSEN, V.I., MARTYANOV, YU.A.
COUNTRY OF INFO--USSR A
SOURCE--TSVET. METAL. 1970, 43(5), 89-91
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--LEACHING, COPPER ORE, EXTRACTIVE METALLURGY, BACTERIA,
MAGNETIC FIELD, HYDROMETALLURGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0131

STEP NO--UR/0136/70/043/005/0089/0091

CIRC ACCESSION NO--AP0132424

UNCLASSIFIED

2/2 040

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0052021

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE PRESENTED OF MEASUREMENTS OF THE LONGITUDINAL AVERAGED AND PULSATION VELOCITY PROFILES OF TURBULENT FLOW AT SEVERAL SECTIONS OF A RECTANGULAR CHANNEL FOR MODERATE BLOWING THROUGH THE POROUS LOWER WALL. A METHOD FOR CALCULATING THE AVERAGE LONGITUDINAL VELOCITY IS PROPOSED ON THE BASIS OF THE EMPIRICAL RELATIONS OBTAINED. RESULTS ARE PRESENTED OF A SPECTRAL ANALYSIS OF THE LONGITUDINAL PULSATION VELOCITY IN THE FORM OF THE DEPENDENCE OF THE ENERGY SPECTRAL FUNCTION Ψ ON THE WAVENUMBER K .

UNCLASSIFIED